

What you should know about tsunamis

To save your life

To protect your boat



Crescent City Harbor after the 1960 Chilean tsunami

If you feel a strong earthquake:

On shore – walk to high ground immediately. Follow evacuation routes.
There will be no time to move your boat

On the water – head towards deeper water.

The further you can move your boat offshore, the safer you will be

If you hear that a **tsunami warning** has been issued, there may be time for you to get your boat out of the harbor to safer waters offshore.

Things to consider before moving your boat:

Is the tsunami threat great enough to risk going offshore?

Information from the West Coast Alaska tsunami warning center will tell you when the wave will arrive.

How far offshore is safe?

Head to the 100 fathom line. this should be far enough offshore to provide safety.

Are you prepared to stay at sea for many hours or travel to a distant port?

The tsunami danger period may last eight hours or longer. If the harbor is damaged, you might need to go as far as San Francisco to find a safe port.

What are the current weather conditions?

Winter seas can be hazardous on the North Coast. Carefully consider whether the ambient offshore conditions pose a risk to your safety.

Does your family know what to do if you take your boat offshore?

Make sure your family has a plan and knows what to do in the event of a tsunami and how you will get in contact after the event.

Tsunami bulletins:

The West Coast Alaska Tsunami Warning Center provides tsunami information to California. They monitor earthquake activity and water levels and can estimate the size and location of any large earthquake in the Pacific basin in less than 15 minutes. For earthquakes larger than magnitude 7, one of the following bulletins will be issued:

Tsunami Warning: A significant tsunami is considered imminent – the first waves are usually expected within three hours. If you hear that a Warning has been issued, you should consider moving your boat to deeper water.

Tsunami Watch: A tsunami may have been generated but the threat is uncertain and the first wave arrival is more than three hours away. Stay alert for more information. May be upgraded to a Warning as more information becomes available.

Tsunami Advisory: No significant flooding is expected but harbors may be vulnerable to damage similar to the November 2006 tsunami in Crescent Harbor.

Tsunami Information: There is no tsunami risk, this bulletin is issued for information only – relax, no action is needed.

Warning, Watch and Advisory bulletins are updated every half hour and may be changed or cancelled as more information becomes available. These bulletins include the expected arrival time of the first wave at Crescent City – which is a good indicator for the entire North Coast.

How will I be notified that a tsunami warning has been issued?

Tsunami Warning, Watch and Advisory bulletins will be broadcast on TV and radio stations and on NOAA Weather radios. You may also be notified by reverse calling, door-to-door contact by emergency responders and civil air patrol flyovers.

Be sure your contact information is current so that Harbor District and emergency officials can reach you if an alert bulletin has been issued.

How will I be updated?

Large tsunamis are caused by big earthquakes on major fault systems. There is a risk of tsunamis caused by earthquakes both nearby and elsewhere in the Pacific. For a nearby earthquake – the earthquake is your warning. Follow the advice on the cover of this brochure

IF YOU ARE ON LAND OR ON THE DOCK, EVACUATE INLAND

IF YOU ARE IN YOUR BOAT AWAY FROM THE DOCK, HEAD TO DEEPER WATER.

There will be no time to issue warning bulletins or update them before the first surges strike.

For large earthquake elsewhere in the Pacific, it will take four hours or longer for the first tsunami surge to reach the North Coast and the first bulletins issued will be a tsunami Watch. The Tsunami Warning Center will update bulletins every half hour and can reassess the threat as more information becomes available. It is important for you to be aware of the situation as it changes.

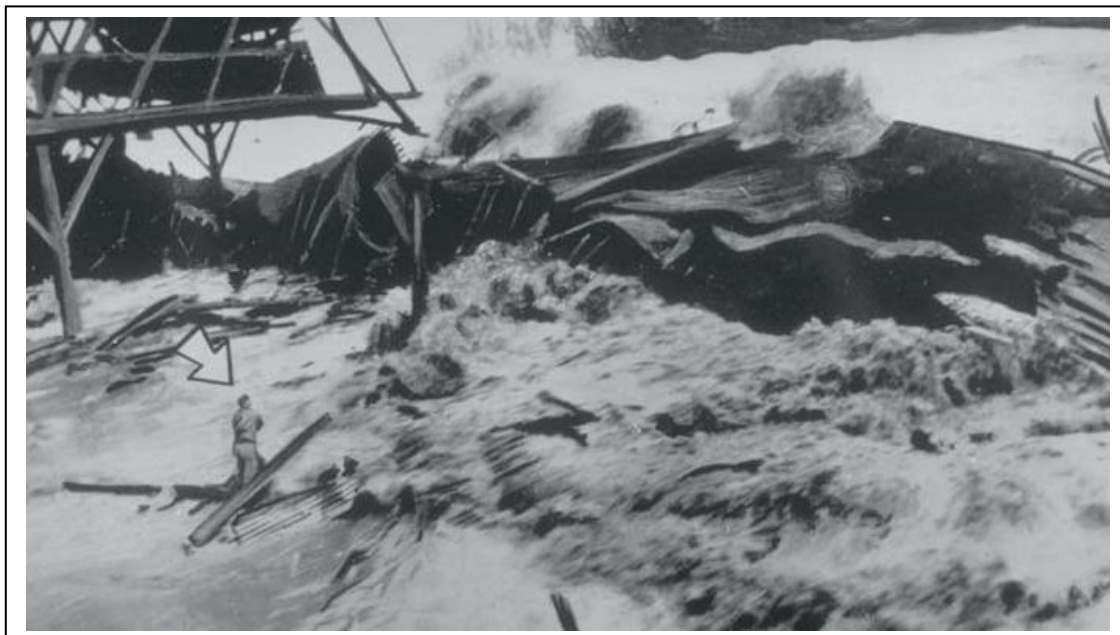
Remember:

A tsunami always consists of many surges that can be spaced minutes to over an hour apart. For the North Coast, the first surge is never the largest. In 1964, the greatest damage was done by the fourth surge and in 2006 by the sixth surge. The danger period can last eight hours or longer.

Never put to sea while a tsunami is in progress. The water in between surges can be deceptively calm. Five people died in Crescent City in 1964 when they launched a boat near the crest of the fourth wave and were caught in the strong outflow.

The tsunami warning system is most effective when the earthquake is far from our area and the first wave will take several hours to reach the North Coast. If the earthquake is close by, your only warning will be the strong, long duration ground shaking. FOR A LARGE LOCAL EARTHQUAKE FOLLOW THE ADVICE ON THE COVER OF THIS BROCHURE –

Don't go on the docks during a tsunami. It may be tempting to try to secure your boat – DON'T DO IT. YOUR LIFE CANNOT BE REPLACED.



Dock foreman Antone Aguiar was attempting to untie the SS Brigham Victor in Hilo Harbor during the 1946 tsunami. His body was never found.

About tsunamis

- A tsunami is a series of waves or surges most commonly caused by an earthquake beneath the sea floor.
- An unusual lowering of ocean water, exposing the sea floor, is frequently a warning of a tsunami. This “draw back” means that the water will surge back strongly.
- Beaches, lagoons, bays, estuaries, tidal flats and river mouths are the most dangerous places to be. It is rare for a tsunami to penetrate more than a mile inland.
- Tsunami waves are unlike normal coastal waves. Tsunami waves are more like a river in flood or a sloping mountain of water without a defined face and filled with debris.
- Large tsunamis may reach heights of twenty to fifty feet along the coast and, in isolated areas, even higher. The first tsunami surge is not the highest and the largest surge may occur hours after the first wave. It is not possible to predict how many surges or how much time will elapse between waves for a particular tsunami.
- Tsunamis are not surfable. They have no face for a surf board to dig into and are usually filled with debris.
- The entire California Coast is vulnerable to tsunamis. The Crescent City Harbor on California’s North Coast suffered significant tsunami damage as recently as 2006, and a dozen people were killed in California following the 1964 Alaska earthquake.



Develop a Family tsunami emergency plan now

How you prepare will affect how you recover. Being prepared for tsunamis prepares you for all kinds of disasters.

- Know if you live, work, or play in a tsunami hazard zone.

- Learn what the recommended tsunami evacuation routes are in your city, county and region. Identify safety zone(s) near you, and decide on your primary and secondary evacuation routes.
- Assemble a small evacuation kit with essential documents, medications, water, snacks and warm clothes. If you live or work in a tsunami hazard zone, leave it by the door so you can “grab and go”.
- Get a NOAA Weather Radio with the Public Alert feature for your home and office if you live or work in a tsunami hazard zone. It is your personal siren and will alert you even if turned off. Include a portable NOAA weather radio in your grab and go kit.
- Walk your route – consider what you would do at night or in stormy weather.
- Make a reunification plan with your family. Decide when and where you will meet if you are separated, and what out of state relative you will call as a back-up.
- Discuss emergency plans with family, coworkers and neighbors.
- Make plans for how to address any functional needs or disabilities anyone in your family might have. If you need help evacuating, prearrange assistance from neighbors including transport of mobility devices and durable medical equipment. If you are mobility impaired, account for the extra time that you may need.
- Decide on the best strategy for protecting your pets.
- Consider joining a Community Emergency Response Team (<http://www.csc.ca.gov/cc/cert.asp>)